AMENDMENTS TO THE CLAIMS

Listing of Claims:

1.-19. (Canceled).

20. (Previously Presented) A method for dehumidification and/or sanitation of sewage sludge in a drying chamber, wherein thermal radiation is used concentrated to one or more distinct wavelength ranges at which water has peaks for absorption of radiation energy; air is circulated in the chamber by means of a fan to take up moisture evaporated from the material; and the wavelengths of the radiation are shorter than the openings of the surface structure of the sewage sludge.

21. (Currently Amended) The method of claim 20, wherein at least one element is disposed in the drying chamber emitting thermal radiation and the emitted radiation is concentrated to exact wavelength ranges where the water has an absorption coefficient greater than ~~approx.~~ approximately 1,000 cm^{-1}, while the radiation is reduced in other areas.

22. (Currently Amended) The method of claim 21, wherein the radiation is concentrated to the wavelength ranges of ~~approx.~~ approximately 6-7 µm and ~~approx.~~ approximately 10-20 µm, while the radiation in the intermediate range~~, i.e. approx.~~ of approximately 7-10 µm is reduced.

23. (Previously Presented) The method of claim 20, wherein the prevailing moisture ratio and/or the temperature of the material and/or the chamber is monitored.

24. (Previously Presented) The method of claim 23, wherein the moisture ratio of the material and/or the chamber is monitored by means of one or more indicators.

25. (Previously Presented) The method of claim 23, wherein the moisture ratio of the material and/or the chamber is monitored by means of a weighing machine, monitoring the total weight of the chamber.

26. (Previously Presented) The method of claim 20, wherein the air of the chamber is circulated by means of the fan, an air inlet placed at one end of the chamber and an air outlet placed at an opposite end of the chamber; that the air is recirculated by means of a conduit going from one end of the chamber to the opposite end; that a heat exchanger is placed in the conduit; that one or more dampers are arranged to let out air from the chamber; and/or that a condenser is placed in the chamber.

27. (Currently Amended) The method of claim 20, wherein the material ~~to be dehumidified etc.~~ is received on a conveyor belt inside the chamber.

28. (Currently Amended) The method of claim 20, wherein the material ~~to be dehumidified~~ is received on one or more carriages.

29. (Currently Amended) The method of claim 27, wherein the thermal radiation is reflected on high-reflective material on the inside of the chamber and on the surface of the conveyor belt ~~or the carriages~~ receiving the material.

30. (Previously Presented) The method of claim 20, wherein the sewage sludge is kept at a constant temperature in the interval range of 70-120 °C during the humidification cycle.

31. (Previously Presented) The method of claim 20, wherein it is used as a part of an ecological system of recycling.

32. (Previously Presented) An apparatus for dehumidification, drying or the like in accordance with the method as claimed in claim 20, wherein the apparatus comprises a drying

chamber including at least one element disposed in the drying chamber for emitting thermal radiation; a fan is provided for the circulation of air in the drying chamber; indicators are provided for sensing the temperature and/or moisture ratio of the chamber and/or the material to be dehumidified, dried or the like; and a control system (PLC system) is provided for controlling the elements and the fan in response to signals received from the indicators.

33. (Previously Presented) The apparatus of claim 32, wherein the elements are mounted in racks and that the racks have surfaces displaying high reflectance.

34. (Previously Presented) The apparatus of claim 32, wherein the drying chamber is constructed from a chamber which, on the inside, is made of or clad with a material displaying high reflectance; the drying chamber is provided with an air inlet, an air outlet, a fan system, a conduit, including a heat exchanger, for recirculation of the air of the chamber and one or more ventilation dampers; indicators are provided for sensing temperature and air humidity in the drying chamber; indicators are provided for sensing the weight of the sewage sludge; and the signals from all indicators are fed to a calculation and control device.

35. (Previously Presented) The apparatus of claim 32, wherein a conveyor belt and/or a condenser is placed inside the chamber.

36. (Previously Presented) The apparatus of claim 32, wherein each element comprises an electrical resistor surrounded by a tube or the like and/or that the part surrounding the electrical resistor is made of material having properties to give the desired radiation spectrum.

37. (New) The method of claim 28, wherein the thermal radiation is reflected on high-reflective material on the inside of the chamber and on the surface of the carriages receiving the material.

38. (New) A method for treating material in a chamber, the method comprising:

emitting thermal radiation into the chamber, the thermal radiation having

- a relatively greater intensity in at least one wavelength range for which water has an absorption coefficient greater than 1,000 cm^{-1},
- a relatively lesser intensity at wavelengths outside of said at least one wavelength range, and
- wavelengths that are shorter than the openings of the surface structure of the material; and

circulating air in the chamber to take up moisture evaporated from the material.

39. (New) The method of claim 38, comprising:

maintaining the material at a stationary location while emitting the thermal radiation.